with acetate of aluminum sol., and the whole dressed with protective and a permanent dressing of 5% sublimate and iodic chloride glycerine gauze. The extremity is fixed and suspended for hours. After application of stiff bandage over the splints, the Esmarch's bandage is loosened. In no case was subsequent hæmorrhage observed. Drainage is superfluous.

The author then discusses the osteotomies about the knee joint including Macewen's operation.—*Deutsche Zeitschr f. Chir.* Bd. xxiv, heft. 1 and 2.

HENRY KOPLIK (New York)

V. Recurrent Sarcoma in Clavicle; Excision of Clavicle; Death from Secondary Growth in Brain. By CHRISTOPHER HEATH (London.) The patient, aged thirty, stated on admission that about four years ago he had had a tumor removed from the tissues over the outer part of his left clavicle, and this growth had been present twelve months before its removal. There was no recurrence of the disease until about three months ago, when he fell and sustained a fracture of his left clavicle, soon after which a swelling of this bone was noticed. On examination the scar three inches and a half long was situated over the outer part of the clavicle. The bone was broken about the middle, and the inner end of the outer fragment was displaced inwards behind the outer end of the inner fragment. Surrounding the broken ends there was a soft solid growth, measuring one inch and a half in diameter; distinct expansile pulsation could be felt in it. No enlarged glands could be found nor signs of internal recurrence. The sixth day after admission Heath made an incision along the entire length of the clavicle, and divided the attachments of the muscles to the bone. The anterior part of the capsule of the sterno-clavicular joint was divided with the knife and the posterior part was torn through with a periosteal elevator; the sternal end of the bone was then pried up and the rhomboid ligament divided with a scalpel; the sternal end of the bone was then wrenched forwards and torn free from the subjacent tissues; the acromial end was easily separated from the adjacent tissues, disarticulated and removed. During the latter part of the operation the transverse cervical and suprascapular arteries were

exposed and the former wounded. A double ligature was applied—the wound was dusted over with iodoform, sutured, drained from the outer angle, and dressed with iodoform wool—a pad of wool was placed in the axilla, and the arm was bandaged to the chest. Except at its extremities the clavicle was infiltrated with sarcomatous growth which was composed of a mixture of round and spindle shaped cells. The wound was dressed on the second, fifth and seventh days after the operation. But the patient remained in a drowsy state which gradually passed into coma. On the ninth day after the operation, well marked optic neuritis of both eyes was detected; and a secondary growth in the brain was diagnosed. Subsequently both pupils became dilated and inactive to light; paralegsia supervened, and on the eleventh day after the operation the patient died.

On post mortem examination the wound was soundly healed and quite dry. There was distinct bulging towards the middle line of the inner surface of the right frontal lobe, and on section a round mass of growth about the size of a walnut was found in the white substance of the frontal lobe. No other growths in the brain could be found. There was a secondary sarcomatous deposit in the apex of the left lung close beneath the clavicle; there was also another mass at the base, a third at the foot, and other scattered patches. In the right lung there was a number of small deposits varying in size from a pea to a Barcelona nut. The other organs were healthy.—*Lancet*, April 14, 1888.

H. PERCY DUNN (London.)

VI. Arthrectomy. By H. H. CLUTTON, F.R.C.S. (London.) Mr. Clutton urges that the operation should be done directly it is found that treatment by apparatus to keep the joint absolutely at rest has failed. If thus done at an early period the disease will not be too advanced and an excision thus rendered unnecessary. He considers that it cuts short the disease, and the patient makes a much more rapid recovery. No attempt should be made to obtain a movable joint. As to the method of operating, he says, "the joint being widely opened all the synovial membrane which is obviously diseased is removed with scissors or scalpel. If only a sharp spoon were used, the diseased parts could not be thoroughly taken away, for the *surface* alone is soft